CLAIMS:

12 1. A device for atomizing and granulating liquid oxidic slags such as, *e.g.*, converter slags, blast furnace slags or waste incineration slags, comprising a slag tundish having an outlet opening into which a height-adjustable lance for a propellant jet opens and to which a cooling chamber is connected, said outlet opening being surrounded by an immersion tube (6) arranged concentrically with said outlet opening while forming an annular gap, wherein a guide body (2) capable of being adjusted in the axial direction (3) of the lance (1) is arranged in the region of the nozzle mouth of the lance (1) for the propellant jet (15), which guide body deflects the propellant jet (15) in the radial direction.

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13 2. A device according to claim ~~1~~ 12, further comprising coolant outlets (12) which eject coolant and are directed radially inwards and are arranged concentrically with a slag jet formed in the region of the outlet opening (8) or immediately following the outlet opening (8).

14 3. A device according to claim ~~1~~ 12, wherein the outlet opening (8) is designed as a torus-shaped ring (11) to whose annular cavity a coolant supply duct (13) and radially inwardly directed coolant outlets (12) are connected.

15 4. A device according to claim ~~2~~ 13, wherein the outlet opening (8) is designed as a torus-shaped ring (11) to whose annular cavity a coolant supply duct (13) and radially inwardly directed coolant outlets (12) are connected.

16 5. A device according to claim ~~1~~ 12, wherein the propellant jet nozzle is designed as a Laval nozzle and the guide body (2) arranged in the propellant jet nozzle leaves a clear cross

section relative to the nozzle mouth, which widens in the direction of ejection of the propellant jet.

17 6. A device according to claim ~~2~~ 13, wherein the propellant jet nozzle is designed as a Laval nozzle and the guide body (2) arranged in the propellant jet nozzle leaves a clear cross section relative to the nozzle mouth, which widens in the direction of ejection of the propellant jet.

18. ~~7~~. A device according to claim ~~3~~ 14, wherein the propellant jet nozzle is designed as a Laval nozzle and the guide body (2) arranged in the propellant jet nozzle leaves a clear cross section relative to the nozzle mouth, which widens in the direction of ejection of the propellant jet.

19. ~~8~~. A device according to claim ~~2~~ 13, wherein the coolant outlets (12) are designed as Laval nozzles.

20 ~~9~~. A device according to claim ~~3~~ 13, wherein the coolant outlets (12) are designed as Laval nozzles.

21 10. A device according to claim ~~2~~ 14, wherein the pressure of the coolant ejected from the coolant outlets (12) is adjusted to be higher than the pressure of the propellant jet (15).

22 11. A device according to claim ~~3~~ 14, wherein the pressure of the coolant ejected from the coolant outlets (12) is adjusted to be higher than the pressure of the propellant jet (15).

23 12. A device according to claim ~~1~~ 12, wherein a jet of combustion off-gases and vapor is used as said propellant jet.

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~~12~~. A device according to claim ~~2~~, wherein a jet of combustion off-gases and vapor is used as said propellant jet.

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~~14~~. A device according to claim ~~3~~, wherein a jet of combustion off-gases and vapor is used as said propellant jet.

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~~15~~. A device according to claim ~~2~~, wherein gaseous hydrocarbons are used as said coolant.

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~~16~~. A device according to claim ~~3~~, wherein gaseous hydrocarbons are used as said coolant.

28 12

~~17~~. A device according to claim ~~1~~, wherein the propellant jet is fed to the nozzle mouth of the lance (1) under supercritical pressure.

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~~18~~. A device according to claim ~~2~~, wherein the propellant jet is fed to the nozzle mouth of the lance (1) under supercritical pressure.

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~~19~~. A device according to claim ~~3~~, wherein the propellant jet is fed to the nozzle mouth of the lance (1) under supercritical pressure.

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~~20~~. A device according to claim ~~2~~, wherein the propellant jet is fed to the nozzle mouth of the lance (1) under supercritical pressure, and the coolant is fed to the coolant nozzles (12) under supercritical pressure.

32 12

~~21~~. A device according to claim ~~1~~, wherein the guide body (2), on its jacket defining the nozzle cross section, carries guide surfaces, in particular curved guide surfaces, having semi-radial or tangential courses.

22. 33 A device according to claim 2, 13 wherein the guide body (2), on its jacket defining the nozzle cross section, carries guide surfaces, in particular curved guide surfaces, having semi-radial or tangential courses.

23. 34 A device according to claim 1, 12 further comprising a magnetic separator arranged within the cooling chamber (10) or following the cooling chamber (10).

24. 35 A device according to claim 2, 13 further comprising a magnetic separator arranged within the cooling chamber (10) or following the cooling chamber (10).

25. 36 A device according to claim 1, 12 wherein the nozzle mouth of the propellant jet lance (1) is arranged above a lower edge (7) of the immersion tube (6).

26. 37 A device according to claim 2, 13 wherein the nozzle mouth of the propellant jet lance (1) is arranged above a lower edge (7) of the immersion tube (6).

27. 38 A device for atomizing and granulating liquid oxidic slags such as, *e.g.*, converter slags, blast furnace slags or waste incineration slags, comprising

a slag tundish having an outlet opening into which a height-adjustable lance for a propellant jet opens and to which a cooling chamber is connected, said outlet opening being surrounded by an immersion tube (6) arranged concentrically with said outlet opening while forming an annular gap, wherein a guide body (2) capable of being adjusted in the axial direction (3) of the lance (1) is arranged in the region of the nozzle mouth of the lance (1) for the propellant jet (15), which guide body deflects the propellant jet (15) in the radial direction; and further comprising

coolant outlets (12) which eject coolant and are directed radially inwards and are arranged concentrically with a slag jet formed in the region of the outlet opening (8) or immediately following the outlet opening (8);

a magnetic separator arranged within the cooling chamber (10) or following the cooling chamber (10); and wherein

the outlet opening (8) is designed as a torus-shaped ring (11) to whose annular cavity a coolant supply duct (13) and radially inwardly directed coolant outlets (12) are connected;

the propellant jet nozzle is designed as a Laval nozzle and the guide body (2) arranged in the propellant jet nozzle leaves a clear cross section relative to the nozzle mouth, which widens in the direction of ejection of the propellant jet;

the coolant outlets (12) are designed as Laval nozzles;

a jet of combustion off-gases and vapor is used as said propellant jet;

gaseous hydrocarbons are used as said coolant;

the propellant jet is fed to the nozzle mouth of the lance (1) under supercritical pressure, and the coolant is fed to the coolant nozzles (12) under supercritical pressure;

the guide body (2), on its jacket defining the nozzle cross section, carries guide surfaces, in particular curved guide surfaces, having semi-radial or tangential courses; and

the nozzle mouth of the propellant jet lance (1) is arranged above a lower edge (7) of the immersion tube (6).